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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/620,227	07/15/2003	David L. Zenker	KCC 4975 (K-C 19,019)	8513

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SENNIGER POWERS LEAVITT AND ROEDEL
ONE METROPOLITAN SQUARE
16TH FLOOR
ST LOUIS, MO 63102

EXAMINER

MATZEK, MATTHEW D

ART UNIT	PAPER NUMBER
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1771

DATE MAILED: 08/29/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary

Application No.

10/620,227

Applicant(s)

ZENKER ET AL.

Examiner

Matthew D. Matzek

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 July 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>7/6/05, 1/10/05</u> | 6) <input checked="" type="checkbox"/> Other: <u>See Continuation Sheet</u> . |

Continuation of Attachment(s) 6). Other: IDS: 7/26/04, 4/8/04, 10/8/03, 9/22/03.

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1. The Amendment and Remarks dated 7/6/2005 have been considered and entered into the Record.

2. All rejections involving Cederblad et al. (US 6,204,207) have been withdrawn as the machine direction strands of the applied article are virtually eliminated as they are melted into the adjacent fabric layer (col. 13, lines 23-25). This withdrawal pertains to claims 1, 2, 5, 6, and 27-30 rejected under 35 U.S.C. 102(b), claims 3, 4, and 9-16 rejected under 35 U.S.C. 103(a) as being unpatentable over Cederblad et al. in view of Ohnishi et al. (WO 00/37000), claims 7 and 8 rejected under 35 U.S.C. 103(a) as being unpatentable over Cederblad et al. in view of Swartz (US Patent 2,161,539), claims 24 and 25 rejected under 35 U.S.C. 103(a) as being unpatentable over Cederblad et al. in view of Sabee (US Patent 3,587,579), claims 17-23 rejected under 35 U.S.C. 103(a) as being unpatentable over Cederblad et al. in view of Ducker et al. (US Patent 5,622,581), and claim 23 rejected under 35 U.S.C. 103(a) as being unpatentable over Cederblad et al. in view of Ducker et al. in further view of Schafer et al. (US PG Pub 2004/0092898).

3. The rejection of claims 1, 2 and 6 under 35 U.S.C. 102(b) as being anticipated by Brooks et al. (AU 458,424) has been withdrawn. Brooks et al. fails to teach a combination of MD and CD fibers with compositions that lead to the instantly claimed article.

4. The rejection of claims 1 and 17-19 under 35 U.S.C. 102(e) as being anticipated by Melius et al. (US Patent 6,802,834) has been withdrawn. Melius et al. fails to teach a difference in strengths, thicknesses, densities and/or stiffnesses between the MD and CD fibers of the reinforcing scrim.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1-30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. It is unclear to Examiner what is intended by “reduced stiffness” in discussing the absorbent core in the cross direction. Applicant is directed to amend claim 1 to explicitly claim in comparison to what the absorbent core has a reduced stiffness.

Rejections - 35 USC § 102

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

6. Claims 1, 2, 5, 6, and 27-28 rejected under 35 U.S.C. 102(b) as being anticipated by Mesek et al. (US Patent 4,235,237).
- a. Mesek et al. disclose an absorbent open network for use in a disposable, body-fluid absorbing article such as a disposable diaper, sanitary napkin, or the like (Abstract). Example 4 of the applied patent comprise 21 warp threads (MD) of 30/1 cotton count yarn and 11 weft threads (CD) of 38/1 cotton count yarn (col. 14, lines 35-40). This yields a strand frequency of about ~0.52 (CD) to 1.0 (MD) (calculation done by Examiner). The Examiner equates the warp threads to Applicant’s machine direction fibers as in both cases the cited fibers run the length of the article. The same reasoning is used to equate the weft threads to the cross direction fibers as both run the width of the

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article. The higher thread count of the machine direction in comparison to the cross direction yields a “reduced stiffness in the cross direction of the absorbent core”.

7. Claims 1, 2, 5, 6, and 26-28 rejected under 35 U.S.C. 102(b) as being anticipated by Quantrille et al. (US Patent 5,334,446).

a. Quantrille et al. disclose a composite elastic nonwoven fabric, which includes an elastomeric net and at least one fibrous web including binder fibers (Abstract). The disclosed invention may be used in bandaging materials, garments, diapers, supportive clothing and personal hygiene products (col. 1, lines 12-19). The binder fibers of layer 12 and 26 preferably include natural fibers such as cotton and wood pulp fibers (col. 8, lines 26-37). These natural fibers are absorbent fibers and as such serve as Applicant's instantly claimed absorbent core. Differential elasticity can be provided in the fabrics of this invention (col. 2, lines 21-24). The composite elastic nonwoven fabrics of the invention include an elastomeric net and a fibrous web intimately hydroentangled together (col. 2, lines 25-27). The applied patent teaches the creation of a fabric with anisotropic stretch properties, or directionalized stretch properties by employing elastomeric strands having different stretch properties in the longitudinal (MD) and transverse (CD) directions. This includes fabrics only having longitudinal (MD) elasticity (col. 3, lines 15-27). The elastomeric net includes spaced apart MD and CD strands which intersect to form apertures. Preferably the MD and CD strands are provided in an amount such that there are between about 5 and about 30 or more strands per inch (col. 4, lines 4-17). Example 1 uses an 18x9 (strands/inch, MDxCD) fabric (col 10, lines 20-25). This yields a strand frequency of 0.50 (CD) to 1.0 (MD) (calculation

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done by Examiner). Example 10 uses a 25x15 (strands/inch, MDxCD) fabric (col 13, lines 32-35). This yields a strand frequency of 0.60 (CD) to 1.0 (MD) (calculation done by Examiner).

8. Claims 1-6, 15, and 25-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Ouellette et al. (US Patent 6,093,663).

- a. Ouellette et al. teach an elastic laminate comprising at least one fabric layer and an open cell mesh having first and second strands. The first fibers are deformed such that they are substantially flat in shape and the second fibers are elliptical in shape (Abstract). The Examiner equates the open cell mesh to the woven scrim of Applicant's invention. The applied invention is directed to an elastic absorbent article (col. 1, lines 15-20). The laminate is preferably elastic in at least a portion of the structural direction D, the direction of the second fibers 28, mislabeled 29 in Figures 1 and 2, and inelastic in the direction of the first fibers (col. 2, lines 5-13 and col. 3, lines 45-50). The Examiner interprets the applied invention to have first fibers that are the MD fibers of Applicant and second fibers that are CD fibers of Applicant as length/machine direction is directed to the larger dimension and the width/cross direction is directed to the smaller dimension. Applicant is directed to Figures 1 and 2. The inelasticity in the MD and the elasticity in the CD yields an article with a lower stiffness of the absorbent core in the cross direction.
- b. Claims 2-6 are rejected as MD fibers have a strand frequency of between 2 and 10 per centimeter and the CD fibers have a strand frequency of between 2 and 5 (col. 12, lines 1-28). This yields a CD to MD strand frequency ratio ranging from 1.0 CD to 1.0 MD to 0.2 CD to 1.0 MD.

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- c. Claim 15 is rejected as the CD fibers are substantially elliptical with major and minor axes being arranged substantially normal to a plane of the MD strands (Abstract). The MD fibers are left with a flattened elliptical shape in the final product (Figures 1 and 2).
- d. Claim 25 is rejected by Figure 1 and claim 26 is rejected as the CD fibers are elastic and the MD fibers are inelastic providing the MD fibers with a higher modulus of elasticity. Claims 27-30 are rejected as the structural limitations set forth in claim 1 and as such can serve as an absorbent article in the instantly claimed garments.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

- 9. Claims 7 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ouellette et al. (US Patent 6,093,663) as applied to claim 1 above, and further in view of Swartz (US 2,161,539). The invention of Ouellette et al. is silent as to the incorporation of different strand frequencies in different zones of the disclosed article.

- a. Swartz discloses a baby diaper, which has greater absorptive properties in areas where such properties are most needed (col. 1, lines 1-4). The diaper of Swartz has sections 6 and 7 (Fig. 2) that are more absorptive than the rest of the article due to the warp yarns being spaced closer together (varied spacing frequency) (col. 2, lines 24-30). The diaper has end sections 3 and 4 in which both the warp and weft yarns are substantially the same size and weight (col. 2, lines 3-7).

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b. Since Ouellette et al. and Swartz are from the same field of endeavor (i.e. absorbent articles), the purpose disclosed by Swartz would have been recognized in the pertinent art of Ouellette et al.

c. It would have been obvious at the time the invention was made to one of ordinary skill in the art to have varied the yarn frequency in selected areas in the article of Ouellette et al. The skilled artisan would have been motivated by the desire to create areas of higher absorbency based upon the usage of the article of Ouellette et al., which require areas of varying absorbency.

10. Claims 17-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ouellette et al. (US 6,093,663) as applied to claim 1 above, and further in view of Ducker et al. (US 5,622,581). The invention of Ouellette et al. is silent as to the weakening of the CD strands along their lengths to enhance buckling.

a. Ducker et al. disclose a disposable garment with de-elasticized elastic members via macerators, chemicals, selective laser beams, heat and freezing (Abstract). In the applied invention the elastic strands can be deactivated at points on the web (1) where it is desired to reduce or to eliminate the elastic tension in the finished product (col. 3, lines 28-34 and Figure 1). The means applied to the elastic members are meant to cut or weaken the elastic (col. 4, lines 4-13).

b. Since Ouellette et al. and Ducker et al. are from the same field of endeavor (i.e. absorbent articles), the purpose disclosed by Ducker et al. would have been recognized in the pertinent art of Ouellette et al.

c. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to have de-elasticized at least some of the CD strands of the invention of Ouellette et al. The skilled artisan would have been motivated by the desire to create an article with varying elasticity within the absorptive article in order to prevent undesired discomfort or looseness in the absorptive areas, while remaining elastic in other areas.

11. Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ouellette et al. (US 6,093,663) as applied to claim 22 above, and further in of Schafer et al. (US PG Pub 2004/0092898). Ouellette et al. and Ducker et al. are silent as to the use of calcium carbonate as the chemical means by which the CD strands are de-elasticized.

a. Schafer et al. disclose a breathable absorbent thong shaped sanitary napkin or panty liner (Abstract). The applied publication teaches the incorporation of particles of calcium carbonate into a polymeric backsheet for said absorbent napkin and due to the incompatibility of the calcium carbonate and polymer cracks are formed through the layer of polymer to form micropores, which allow water vapor to permeate through the film (para 67).

b. Since Ouellette et al. and Schafer et al. are from the same field of endeavor (i.e. absorbent articles), the purpose disclosed by Schafer et al. would have been recognized in the pertinent art of Ouellette et al.

c. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to have incorporated calcium carbonate into the strands of Ducker

et al. that make up the reinforcing scrim. The skilled artisan would have been motivated by the desire to deactivate the elastic strands at points on the web via chemical means.

12. Claims 9-14 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ouellette et al. (US Patent 6,093,663) as applied to claim 1 above, and further in view of Melbye (WO 95/34264). The invention of Ouellette et al. silent as to the use of CD fibers of a smaller diameter than the MD fibers.

a. Melbye teaches an elastic, sheet-like composite comprising continuous elastic fibers bonded to one or more sheets of material bonded along its length. The composite may be incorporated into disposable garment such as diapers or training pants (Abstract). The elastic fibers that are bonded to the sheets may be made of continuous elastomeric strands that may be either placed in greater quantity in certain regions and/or thicker and thinner strands may be employed in order to produce an elastic material having different zones of elasticity. Thinner fibers lead to a more elastic fiber than those of thicker diameter. This variation is also possible through the variation of the shape of the fibers from round (page 4, line 21 - page 5, line 3).

b. Since Ouellette et al. and Melbye are from the same field of endeavor (i.e. absorbent, elastic laminates), the purpose disclosed by Melbye would have been recognized in the pertinent art of Ouellette et al.

c. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify the elastic article of Ouellette et al. with CD fibers with a smaller diameter to yield an article with "reduced stiffness" or greater elasticity in the CD than in the MD.

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d. Claims 10-13 are rejected as it would have been obvious to one having ordinary skill in the art at the time the invention was made to have made the article of Ouellette et al. with the instantly claimed MD to CD ratios, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine in the art. *In re Aller*, 105 USPQ 233.

13. Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ouellette et al. (US Patent 6,093,663) as applied to claim 1 above. The applied art teaches an absorbent article with a corrugated MD strand forming peaks and valleys along the cross direction thereof, and CD strands that are arranged to engage the CD strands across the peaks and valleys thereof (Figure 1). It would have been obvious to one of ordinary skill in the art at the invention was made to have switched the MD and CD fibers of the article resulting in the instantly claimed article. The skilled artisan would have been motivated by the desire provide the MD fibers with a larger diameter yielding a stiffer fiber (argument previously provided) and enhanced tensile strength, which provides greater physical integrity for the article.

Response to Arguments

14. Applicant's arguments pertaining to rejections that have been maintained from the Office Action dated 4/8/2005 have been addressed in their maintained rejections.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew D. Matzek whose telephone number is (571) 272-2423. The examiner can normally be reached on 8:30 am - 5:00 pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on (571) 272-1478. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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